

What is claimed is:

1. A transmission apparatus comprising:

specified signal detecting means for detecting a specified signal according to one of V.8 protocol and V.8bis protocol from
5 an input signal consisting of one of a speech signal and a voice band data signal; and

transmitting means for transmitting the input signal to opposite side equipment as a transmission signal via a transmission line such that the transmission signal has
10 different quality depending on whether said specified signal detecting means detects the specified signal or not.

2. The transmission apparatus according to claim 1, wherein said specified signal detecting means consists of an ANSam signal
15 detector for detecting an ANSam signal in a prescribed startup procedure.

3. The transmission apparatus according to claim 1, wherein said specified signal detecting means consists of a V.21 channel No.1
20 detector for detecting a V.21 channel No.1 modem signal in a prescribed startup procedure.

4. The transmission apparatus according to claim 3, further comprising first tone signal detecting means for detecting an
25 unmodulated 2100 Hz tone signal from the input signal, wherein

said transmitting means inhibits, when said first tone signal detecting means detects the unmodulated 2100 Hz tone signal, the transmission signal from being transmitted in a quality in which said transmitting means transmits the
30 transmission signal when said specified signal detecting means

detects the specified signal.

5. The transmission apparatus according to claim 1, further comprising coding means for coding the input signal consisting of one of the speech signal and voice band data signal in a predetermined coding mode, wherein

10 said transmitting means transmits the input signal as the transmission signal with maintaining the quality of the input signal when said specified signal detecting means detects the specified signal, and transmits a signal coded by said coding means in a predetermined quality as the transmission signal when said specified signal detecting means does not detect the specified signal.

15 6. The transmission apparatus according to claim 1, further comprising first coding means for coding the input signal consisting of one of the speech signal and the voice band data signal in a coding mode of a predetermined first quality; and second coding means for coding the input signal in a coding mode of a second quality lower than the first quality, wherein

20 said transmitting means transmits a signal coded by said first coding means as the transmission signal when said specified signal detecting means detects the specified signal, and transmits a signal coded by said second coding means as the transmission signal when said specified signal detecting means does not detect the specified signal.

7. The transmission apparatus according to claim 1, further comprising a receiving-side apparatus for receiving a transmission signal from the opposite side equipment, and for

converting the transmission signal into an original input signal to be output as an output signal, wherein

said specified signal detecting means and said transmitting means constitute a transmitting-side apparatus.

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8. The transmission apparatus according to claim 7, further comprising message transmitting means for transmitting to the opposite side equipment a message indicating a request for switching the quality of the transmission signal; and message receiving means for receiving from the opposite side equipment a message indicating a request for switching the quality of the transmission signal, wherein

said transmitting means switches, when said message receiving means receives the message, the quality of the transmission signal to be sent to the opposite side equipment into the quality specified by the message.

9. The transmission apparatus according to claim 7, further comprising detected information transmitting means for detecting the specified signal, and for transmitting detected information to the opposite side equipment when the specified signal is detected; and detected information receiving means for receiving corresponding detected information from the opposite side equipment, wherein

said transmitting means switches the quality of the transmission signal to be sent to the opposite side equipment, when said detected information receiving means receives the detected information.

10. The transmission apparatus according to claim 1, further

comprising an activity detector for detecting that the channel of the input signal is brought into an inactive state, wherein when said activity detector detects that the channel of the input signal enters the inactive state after said specified signal
 5 detecting means detects the specified signal in the input signal, said transmitting means switches the quality of a channel of the transmission signal, which corresponds to the channel of the input signal.

10 11. The transmission apparatus according to claim 7, further comprising a first activity detector for detecting that the channel of the input signal is brought into an inactive state, and a second activity detector for detecting that a channel of the transmission signal sent from the opposite side equipment
 15 is brought into an inactive state, the channel of the transmission signal corresponding to the channel of the input signal, wherein when both said first activity detector and said second activity detector detect the inactive state after said specified signal detecting means detects the specified signal
 20 in the input signal, said transmitting means switches the quality of a channel of the transmission signal, which corresponds to the channel of the input signal.

12. The transmission apparatus according to claim 1, further
 25 comprising disconnect detecting means for detecting a disconnect, wherein when said disconnect detecting means detects the disconnect after said specified signal detecting means detects the specified signal in the input signal and said transmitting means switches the quality of the transmission signal that
 30 corresponds to the channel of the input signal into the quality

in which the transmission signal is transmitted when the specified signal is detected, said transmitting means switches the quality of the transmission signal into the quality in which the transmission signal is transmitted when the specified signal is not detected.

13. The transmission apparatus according to claim 12, wherein said disconnect detecting means makes a decision that it detects the disconnect when the channel of the input signal continues the inactive state for more than a predetermined time period.

14. The transmission apparatus according to claim 12, wherein said disconnect detecting means makes a decision that it detects the disconnect when the channel of the input signal continues the inactive state for more than a predetermined time period, and when the transmission signal from the opposite side equipment corresponding to the channel of the input signal is in the inactive state.

15. The transmission apparatus according to claim 12, wherein said disconnect detecting means detects the disconnect by monitoring a transmission and reception protocol of one of a facsimile signal and a data-modem signal received as the input signal, and one of a facsimile signal and a data-modem signal received from the opposite side equipment as the transmission signal corresponding to the input signal.

16. The transmission apparatus according to claim 7, wherein said receiving-side apparatus further comprises specified signal detecting means for detecting a specified signal in a

prescribed startup procedure from an output signal of said receiving-side apparatus.

17. The transmission apparatus according to claim 7, wherein
5 said transmitting means transmits the input signal consisting of a facsimile signal from a calling side to a called side to the opposite side equipment in a predetermined first quality, and transmits the facsimile signal from the called side to the calling side to the opposite side equipment at a second quality
10 lower than the first quality.

18. The transmission apparatus according to claim 1, further comprising new call connection detecting means for detecting a new call connection, wherein when said new call connection
15 detecting means detects the new call connection after said specified signal detecting means detects the specified signal in the input signal and said transmitting means switches the quality of the transmission signal corresponding to the channel of the input signal into the quality in which the transmission
20 signal is transmitted when the specified signal is detected, said transmitting means switches the quality of the transmission signal into the quality in which the transmission signal is transmitted when the specified signal is not detected.

19. The transmission apparatus according to claim 18, wherein
25 said new call connection detecting means comprises second tone signal detecting means for detecting from the input signal a tone signal of a specified frequency used for a channel continuity test, and makes a decision that it detects the new call connection
30 when said second tone signal detecting means detects the tone

signal.

20. The transmission apparatus according to claim 18, wherein
said new call connection detecting means comprises third tone
5 signal detecting means for detecting one of a CNG signal and a
CED signal from the input signal, and makes a decision that it
detects the new call connection when said third tone signal
detecting means detects one of the CNG signal and the CED signal.

10 21. The transmission apparatus according to claim 18, wherein
said new call connection detecting means comprises fourth tone
signal detecting means for detecting from the input signal a tone
signal of a specified frequency based on No.5 signaling, and
makes a decision that it detects one of the new call connection
15 and disconnect when said fourth tone signal detecting means
detects the tone signal.

22. The transmission apparatus according to claim 1, wherein
said transmitting means comprises a cell assembler for
20 assembling the input signal into an ATM cell to be transmitted
as the transmission signal when said specified signal detecting
means detects the specified signal.

23. The transmission apparatus according to claim 1, wherein
25 said transmitting means comprises an IP packet assembler for
assembling the input signal into an IP packet to be transmitted
as the transmission signal when said specified signal detecting
means detects the specified signal.

30 24. The transmission apparatus according to claim 1, wherein

said transmitting means comprises a cell assembler for assembling the input signal into an ATM cell to be transmitted as the transmission signal.

- 5 25. The transmission apparatus according to claim 1, wherein
said transmitting means comprises an IP packet assembler for
assembling the input signal into an IP packet to be transmitted
as the transmission signal.